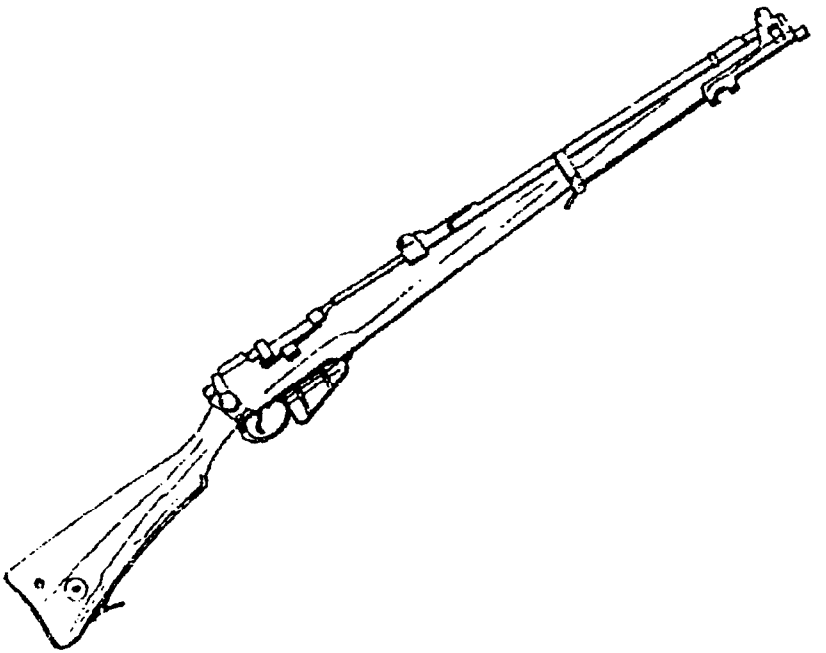
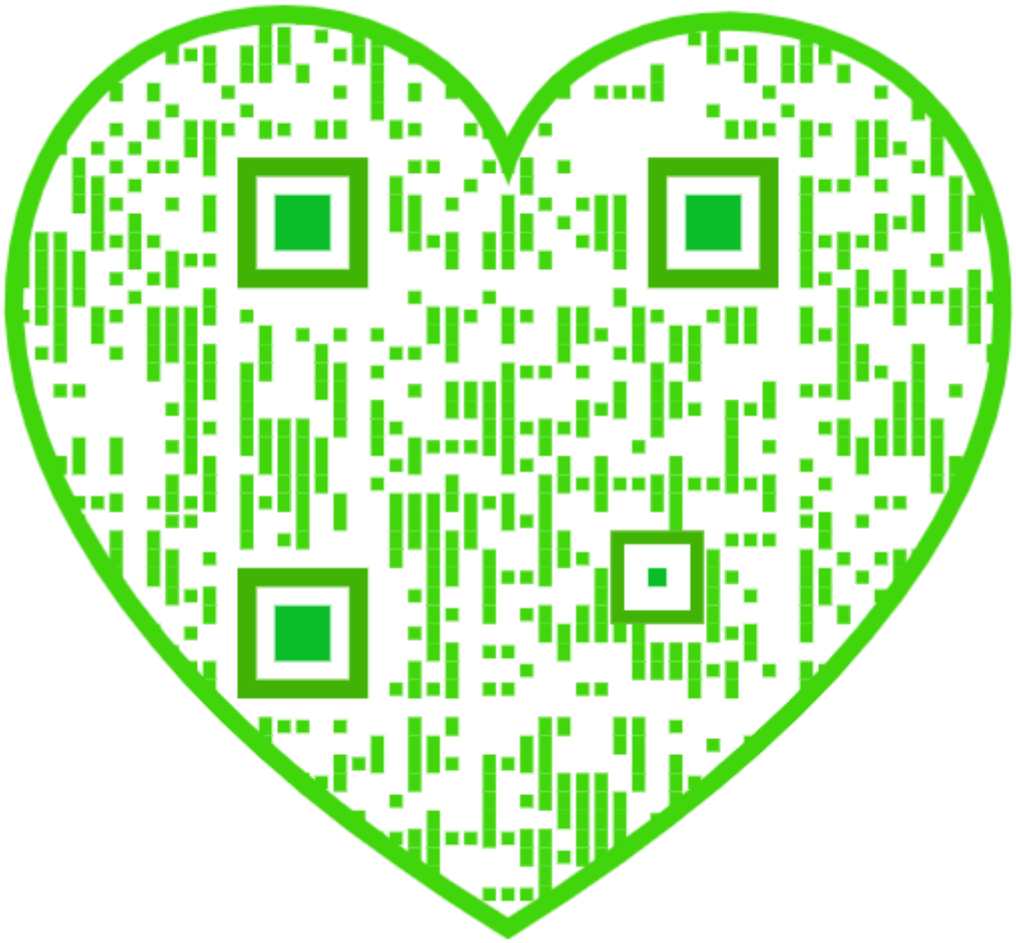
LEE-ENFIELD

RIFLE MANUAL

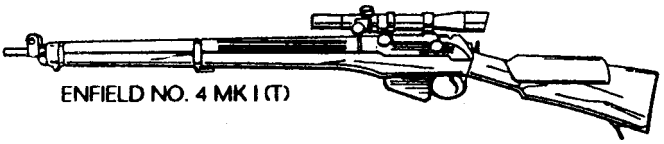
No.1 - - No.3 - - No.4 - - No.5

MKIII **MKI** **MKI** **MKI**





No. 4 Mk. 1



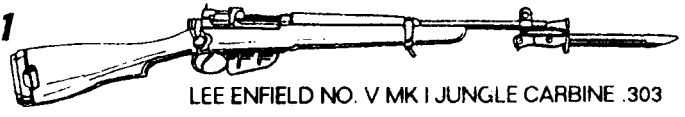
ENFIELD NO. 4 MK I (T)

The No. 4 Mk. 1 rifle was developed from the No. 1 SMLE between the World Wars. It retained the basic Lee action design of the No. 1 rifle, but was extensively modified to improve performance and made easier to manufacture.

Important modifications included a heavier barrel, heavier receiver, aperture rear sight and simplified bedding of the barrel in the fore-end.

Before the Battle of Dunkirk, only a few No. 4 rifles were built. However, after the British disaster, these rifles went into major production in England, Canada and the United States. After World War II, No. 4 rifles were used by Italy, Greece and some Arab countries. The No. 4 Mk. 2 rifles were used during the Korean War. In 1954, the No. 4 rifle was replaced in the British, Canadian and Australian Services by the FN-FAL in 7.62 NATO. No. 4 rifles are by and large in better condition that No. 1's, but for the most part, are not finished as well as the peacetime rifles.

No. 5 Mk. 1



LEE ENFIELD NO. V MK I JUNGLE CARBINE .303

During World War II, the No. 1 SMLE and No. 4 rifles were found to be too long and heavy for jungle fighting. A shorter more handy rifle was needed and the No. 5 Mk 1 was developed and adapted from the earlier rifles. The new rifle became popularly known as the 'jungle carbine", as was a No. 4 with short fore-end and barrel.

It was also fitted with a flash hider and a rubber buttplate. The short fore-end makes the No. 5 look like a sporting rifle. Many of these rifles were built and used in Burma and the South Pacific during the later part of World War II. This version of the Enfield is very popular with shooters and hunters and will likely bring a premium price.

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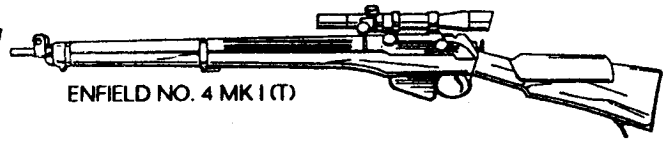

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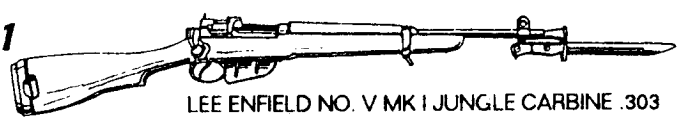

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Technical Specifications

Headspace

The .303 is a rimmed cartridge and headspace is measured from the barrel face to the face of the bolt. Headspace should not exceed .074 inch, but a maximum of 0.08 inch was allowed during wartime. Minimum headspace is .064 inch.

Barrel Gaging

A new barrel should have a bore diameter from .301 to .304 inches. For a used barrel, plug gages from .303 to .310 should be used. The .303 gage should run through the barrel. The .307 should not. The .308 gage should not enter the muzzle more than .25 inch. The .310 gage should not enter the breach more than .25 inch.

Firing Pin Protrusion

The high firing pin protrusion for No. 1 rifles is .055 inch and the low is .050 inch. The high for No. 4's and No. 5's is .050 inch. The low is .040 inch.

Trigger Pull

The first pull or slack should be 3 or 4 pounds. The second pull should be from 5 to 6 pounds. To increase or decrease the trigger pull weight, alter the angle of the cocking piece sear notch.

Buttstock Lengths

Stocks for the No. 1 rifles were made in long and short lengths. During World War I, a special short butt called the Bantam was made. These butts were marked "L", "S" or "B" on the top of the stock about one inch from the buttplate tang. Stocks for the No. 4 and No. 5 rifles come in long, short and normal lengths.

Sights

The front sights for the Enfield were originally a barley corn sight with a small 'v' for the rear. As improvements were made to the rifle, a front blade was used and a u-shaped rear sight replaced the old 'v'. Later a long range adjustable stand-up sight with a peep was used. They were fixed to the barrel. As the rifles were further refined, the rear sights were set over the tang to increase sight radius. These sights have adjustments out to 1600 yards and some can be fine tuned with a worm wheel to more precise increments.

The purpose of the long range sights was not for accuracy. The British like to fire in volleys and were able to use this strategy to terrorize the enemy with a hail of bullets from long range while the hapless enemy could not return fire.

During World War II, sniper scopes were introduced along with mounts and boxes to carry them when the scopes were not attached to the rifle.

loading and Firing

Place the rifle on a table in the upright position or if in the field, place the left hand under the receiver and with the right hand, grasp the bolt and turn it up and to the left. Pull the bolt straight back as far as it will go. Insert a loaded five round clip in the clip guide inside the receiver and force the cartridges down into the magazine with the right thumb. Take out the empty clip. Place another five round clip in the clip guide and strip these cartridges into the magazine. There will be ten rounds in the magazine.

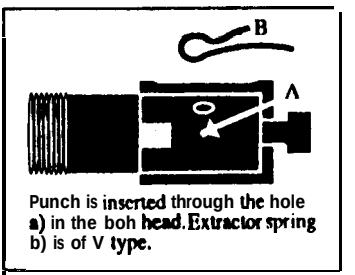
With the right hand, grasp the bolt handle and push it forward and down, (to the right). This will strip a cartridge from the magazine and slide it into the chamber. This action also cocks the firing pin. The rifle is now ready to be fired by squeezing the trigger. If the rifle will not be fired immediately, set the thumb safety on the rear of the receiver to "Safe".

After the rifle has been fired, lift the bolt handle up and to the left. Pull the bolt straight back. This action causes the spent cartridge to be withdrawn from the firing chamber and flipped clear of the receiver. To reload the rifle, push the bolt handle forward and down. A fresh cartridge is stripped from the magazine and slipped into the chamber. The rifle is now ready to fire again. This sequence may be repeated until the magazine is empty.

Insert the t-shaped tool into the notches and turn the cocking piece until the lower two notches are reached. The firing pin spring should be virtually decompressed. Remove the firing pin locking screw found in the rear of the cocking piece. Now we may finish removing the firing pin with the special tool. Unscrewing the firing pin with a 'makeshift rig may cause damage and should be left to a qualified gunsmith.

Removal of the Extractor Spring

Place the bolt in a padded vice and insert a drift punch of less than 0.04 inch in diameter into the small hole found in the bolt head adjacent to the extractor. Push the punch into the hole against the extractor spring and ease the spring forward using a screw driver.



Punch is inserted through the hole a) in the boh head. Extractor spring b) is of V type.

Keep one finger over the extractor slot to keep the spring from jumping out. To reassemble, place the spring into the extractor slot and seat the small projection on the spring into its seat in the bolt head.

Replacing the Bolt

Lee-Enfield bolts are not interchangeable. They have been fitted to their respective boltways. Compare the number of the bolt with the number of the rifle to avoid any chance that might cause you to substitute a bolt in the wrong rifle. Check to see that there is no cartridge in the chamber. Be sure that the bolt head is fully screwed home and that the bolt cocking piece lines up with the lug on the underside of the bolt.

Replace the bolt in the boltway and push if forward. Next, pull the bolt to the rear to the resistance shoulders and force the bolt head down over the spring retaining catch. Then, push the bolt forward all the way and turn the bolt handle down. Hold the rifle so the muzzle is pointing in a safe direction and press the trigger. The firing pin should fall with an audible click.

Field Stripping

First, make sure there is no cartridge in the chamber. Second, remove the magazine.

The magazine catch is located in the forward end of the trigger guard. Push it in or pull it up as your rifle requires. This will release the heavy sheet steel box and it may be withdrawn from the bottom of the receiver. Turn the rifle upside down and push the rear of the magazine follower and spring down past the chamber. You can turn the rifle right side up and pull the forward end of the follower and spring out the top of the receiver.

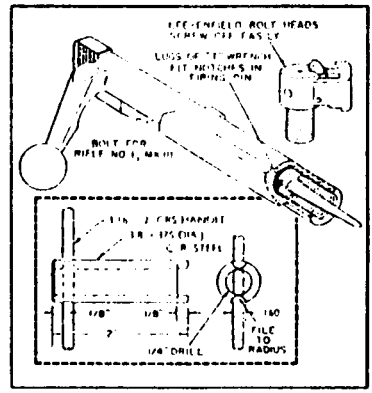
To remove the bolt, you will find the safety catch above the left rear of the trigger guard. Rock the safety catch above the left rear of the trigger guard. Rock the safety forward, then turn the bolt handle up, pull it up and rearward as far as it will go. Hold the rifle steady with the left hand and place the right forefinger under the bolt head. Now pull the bolt up until it is free of its spring catch. Then hold the bolt handle and withdraw the bolt to the rear until it is clear.

Special Instructions for Field Stripping the No. 4 Mark 1 Rifle

First, make sure there is no cartridge in the chamber. In order to withdraw the bolt from the No. 4 Mark I Rifle, find the cut out on the bolt head track. Look on the right side of the receiver. Slide the bolt back until it is over this cut out. Now you can lift the bolt head straight up and remove the bolt from the rifle.

Disassembly of the Bolt for Cleaning and Inspection

The bolt head can be unscrewed from the bolt body. This facilitates cleaning and inspection. The removal of the firing pin can be difficult. However, with the proper tool, it is a simple procedure for the person with some mechanical dexterity. With the bolt head removed, look at the front of the bolt and you will see the two notches on both sides of the firing pin shoulder.

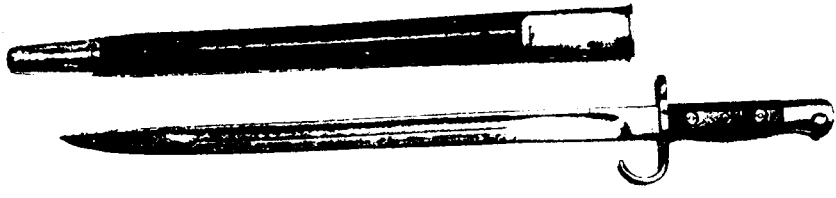


Bayonets

The bayonets for the Lee-Enfield No. 1 rifles look like a short sword as did other bayonets of the time. One had a quillion similar to a knife or sword to parry an enemy thrust. Later bayonets for the Mark 4 rifle were known as the cruciform bayonet because it looks like a cross in cross section. These look like a spike and were easier to fight with than the blade type bayonet.

The British went back to a blade type bayonet with composite hand grips for the No. 7 Mk. 1 after World War II. Another bayonet that appeared after the war was the No. 9 Mk. 1 for the No. 4 rifle. This one has no grips and is a bit less than eight inches in length and is lighter in weight than its predecessors.

BAYONET FOR THE NO. 4 RIFLE.



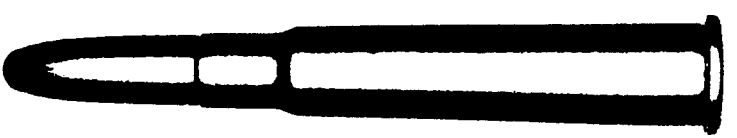
BAYONET HOOKED QUILLION FOR THE NO. 1 RIFLE.

The Lee-Enfield Ballistics

In 1892, the .303 British cartridge was loaded with 70 grains of black powder and had a 215 grain round nose bullet with a muzzle velocity of 1850 fps. Muzzle energy was 1640 fp. By 19 14, with a smokeless powder loading and a 174 grain pointed bullet, the velocity moved up to 2440 fps. This was the Mk. VII round and was still in use when the .303 was discontinued.

Used extensively in Africa, Canada and India by the military, government, workers and settlers, the .303 cartridge suffered from a bad reputation due to the use of the military full metal jacketed pointed bullets. When sporting ammunition became available, the .303 became a reliable cartridge for lighter non-dangerous game. Jacketed ammunition has a bullet diameter of .311 inch. Cast lead bullets can be .3 12 inch or even .3 13 inch.

The .30-40 Krag was the cartridge by which the .303 was judged early in its life. The .303 had a slight edge over the .30-40 and later could take chamber pressures of 50,000 psi. The Enfield Mk. 4 has been successfully converted to .308 Winchester (7.62 NATO). The British .303 is now compared with the more powerful .308 Winchester and the .303 has found its niche in the American market. Plentiful stocks of rifles and ammunition have assured it a place for many years to come.



.303 British

Max. Case Length: 2.222" Trim-To Length 2.212" Max. Overall Length: 3.075" Primer Size: Large Rifle **Bullet Diameter:** .3 1 1"

Rifle Loads for

LOAD NUMBER	BULLET				POWDER			VELOCITY
	WEIGHT	BRAND	SHAPE	TYPE	WEIGHT	BRAND	TYPE	FPS
1	100	SPR	RNN	SP	44.0	IMR	3031	2933
2	150	SPR	PTD	SP	31.0	HER	RE7	2400
3	150	HDY	SPP	SP	44.0	IMR	3031	2787
4	150	HDY	SPP	SP	41.8	HOD	BLC2	2600
5	150				45.5	ACC	2230	2620
6	150	SRA	PTD	SP	48.5	IMR	4320	2808
7	150	HDY	SPP	SP	45.6	HOD	H380	2600
8	150	SPR	PTD	SP	45.0	HER	RE12	2700
9	150	HDY	SPP	SP	50.0	WIN	760	2600
10	150	SPR	PTD	SP	50.0	IMR	4350	2584
11	174	HDY	RNN	SP	43.1	HOD	H380	2400
12	174	HDY	RNN	SP	47.2	WIN	760	2400
13	174	HDY	RNN	SP	46.5	IMR	4350	2400
14	180	SPR	RNN	SP	30.0	HER	RE7	2050
15	180	SRA	PTD	SP	42.0	IMR	3031	2533
16	180				40.0	ACC	2230	2300
17	180	SPR	RNN	SP	40.0	HER	RE12	2340
18	180	SPR	RNN	SP	47.0	IMR	4831	2421
19	180				46.0	ACC	3100	2350

Abbreviations: ACC - Accurate Arms Co.; - Canadian Industries, Ltd.; HDY - Hornady Manufacturing Co.; HER - Hercules, Inc.; HOD - Hodgdon Powder Co.; IMR - IMR Powder Co.;

the .303 British

PRESSURE CUP	CASE BRAND	PRIMER BRAND	PRIMER TYPE	CARTRIDGE OAL	BARREL LENGTH	SOURCE
	CIL	CCI	200		25	SPR
41,200	WIN	WIN	WLR	2.935	24	HER
44,900	REM	WIN	WLR	2.840	26	NRA
	REM	FED	210	3.035	25½	HDY
	REM	CCI	200		24	ACC
43,830	REM	WIN	WLR	2.945	26	NRA
	REM	FED	210	3.035	25½	HDY
42,900	WIN	WIN	WLR	2.935	24	HER
	REM	FED	210	3.035	25½	HDY
	CIL	CCI	200		25	SPR
	REM	FED	210	2.975	25½	HDY
	REM	FED	210	2.975	25½	HDY
	REM	FED	210	2.975	25½	HDY
39,600	WIN	WIN	WLR	2.940	24	HER
44,220	REM	WIN	WLR	3.075	26	NRA
	REM	CCI	200		24	ACC
42,600	WIN	WIN	WLR	2.940	24	HER
	CIL	CCI	200		25	SPR
	REM	CCI	200		24	ACC

PTD - Pointed; RNN - Round Nose; SP - Soft Point; SPP - Spire Point; SPR - Speer; SRA - Sierra Bullets.

Care and Cleaning

The enemy of all weapons is rust. In order to maintain a rust free rifle, a few simple steps must be performed periodically. All metal surfaces should be coated with a light coat of a quality gun oil from time to time depending on the humidity in your area.

In humid areas, more applications of oil are required. The user should pay close attention to the patch that is run through the bore. If the patch comes out dirty or green, a more thorough cleaning is recommended.

After firing the rifle, the bolt should be removed and the rifle should be cleaned. A cleaning rod with screw-in tips should be used for versatility in cleaning of the bore. Other cleaning items include a good quality bore cleaner and oil, G.I. or commercial is fine. Also at hand should be some white cotton or blended cleaning patches, a brass brush in the correct caliber (.303 / 7MM), pipe cleaners, tooth brush and some lint-free cloth. A bore light and rust inhibiting spray such as WD-40 are optional.

Corrosive Ammunition

Corrosive ammunition can be manufactured using less expensive chemicals such as fulminate of mercury. Unfortunately, these chemicals will attract moisture, which in time will cause iron to rust. When corrosive ammunition has been used, the rifle should be cleaned within a day or two after firing. A rusty or pitted bore will destroy the accuracy of any rifle.

Regular Ammunition

To clean the bore, place a clean patch in the slot of the rod tip and saturate it with bore cleaner. Place the rod tip into the breach or chamber area of the rifle and force the rod up the bore until the tip with the patch comes out the muzzle. Pull the rod back through the bore until the tip with the patch comes out the breach or chamber end. Repeat this until the patch has gotten so dirty it will no longer remove fouling. Replace the dirty patch with a clean one, saturate it in gun cleaning solvent and go through the cleaning process again.

When the patches are coming out much cleaner, you have removed the first layer of fouling. Replace the slotted patch tip with the bore brush and run it through the bore from the breach end. Several strokes should be done. Remove the bore brush and screw on the patch tip. Saturate the patch with bore solvent and run it through the bore as before.

Now the patch should look dirty again and it may possibly look green. The green color comes from the interaction of the solvent with copper jacketed ammunition that may have been used. This is normal and means that the solvent is doing its job of removing the cooper residue that is left after the rifle has been shot.

When the patches come out clean, stop rhe cleaning of the bore leaving a heavy coat of solvent in the bore overnight.

General *Cleaning*

All metal surfaces including the sights, should be wiped down with a solvent dampened cloth. Wipe the solvent from the outside surfaces of the metal with a dry cloth. This should remove most grime and powder residue. A light coat of rust inhibitor such as WD-40 can be used to spray the exposed surfaces of metal and then wiped with an oily cloth.

We now turn our attention to the bolt and the internal area of the receiver. The bolt can be unscrewed and placed **in a container** filled with solvent to soak while you wipe down the internal magazine using a cloth with a liberal amount of solvent. Wipe down the boltway, and other places in the receiver with the solvent laden cloth. Be sure to clean the bolt latch and safety knob.

Next, take the toothbrush and dip it in the solvent and scrub inside the receiver and boltways. Crime and fouling will be lifted. **Follow** up with a dry cloth to remove the fouling. When this area is clean, take a pipe cleaner and dip it in solvent. Scrub as many nooks and crannies as possible. This done, wipe all solvent from the internal surfaces of the receiver and magazine area with a dry cloth and pipe cleaners. A light coat of the rust inhibitor may be sprayed here, but remember this is not a lubricant and should be lightly wiped up. A coat of oil should be wiped over all the internal parts just cleaned. It may be necessary to use a pipe cleaner coated with gun oil to reach hard to lubricate places.

Take the bolt out of the cleaning solvent and scrub the exterior with the toothbrush. Wipe it down with a dry cloth. If it has not been soaking, apply a liberal amount of solvent to the interior and exterior surfaces of the bolt, Dip the toothbrush in solvent and scrub the bolt until all fouling has been loosened. Pay close attention to the extractor, removing all fouling.

Wipe all internal and external parts of the bolt clean with a cloth. Coat the bolt with a light coat of gun oil and let it sit out of the rifle overnight.

Final Bore Cleaning

The next day. the bore should be coated with a liberal amount of solvent. The patch will be discolored with dirty powder and may be green from the copper. This is normal. Use the bore brush to clean out any remaining rust, fouling or copper residue.

At this time, you may wish to inspect the bore with a bore light to look for fouling, lead build-up, rust, pits or cracks. Insert the bore light into the breach, turn it on and look down the muzzle to view the bore. If an unusual amount of firing has been done, it may be necessary to repeat the cleaning process the following day.

After the bore comes out clean, dry it with clean, dry patches. Now, coat a fresh patch with gun oil and coat the bore liberally. Finally, you may use a cotton bore swab coated with oil to pass through the bore. It should come out clean. Wipe all exterior metal parts with a light coat of oil. Replace the bolt and set the rifle aside.